

WHAT IS CLAIMED IS:

Sub 1) 1. A semiconductor device comprising a substrate,
a filler and a semiconductor element, wherein the
semiconductor element is separable from the substrate.

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2. The semiconductor device according to claim 1,
which is separable into a laminate having the
semiconductor element, and the substrate.

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3. The semiconductor device according to claim 1,
which further comprises a protective layer, and is
separable into a laminate having the semiconductor
element, and the protective layer.

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4. The semiconductor device according to claim 1,
which further comprises an exfoliative layer.

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5. The semiconductor device according to claim 4,
wherein the exfoliative layer comprises a thermoplastic
resin.

Sub 2) 6. The semiconductor device according to claim 5,
wherein the thermoplastic resin is of non-crosslinking.

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7. The semiconductor device according to claim 4,
wherein the exfoliative layer comprises a degradable
resin.

8. The semiconductor device according to claim 4, wherein the exfoliative layer comprises a foam or a foam precursor.

Sub 527 9. A process for producing a semiconductor device having a substrate, a filler and a semiconductor element; the process comprising the step of producing the semiconductor device in such a way that the semiconductor element is separable from the substrate.

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10. The process according to claim 9, which comprises the step of producing the semiconductor device so as to be separable into a laminate having the semiconductor element, and the substrate.

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11. The process according to claim 9, wherein the semiconductor device further has a protective layer, and which process comprises the step of producing the semiconductor device so as to be separable into a laminate having the semiconductor element and the protective layer.

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12. The process according to claim 9, which comprises the step of producing the semiconductor device so as to have an exfoliative layer.

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13. The process according to claim 12, wherein

the exfoliative layer comprises a thermoplastic resin.

14. The process according to claim 13, wherein the thermoplastic resin is of non-crosslinking.

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15. The process according to claim 12, wherein the exfoliative layer comprises a degradable resin.

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16. The process according to claim 12, wherein the exfoliative layer comprises a foam or a foam precursor.

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17. A method of dismantling a semiconductor device having a substrate, a filler and a semiconductor element; the method comprising separating the semiconductor element from the substrate.

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18. The method according to claim 17, which comprises the step of heating the semiconductor device.

19. The method according to claim 17, which comprises the step of heating and moistening the semiconductor device.

20. The method according to claim 17, wherein the semiconductor device has an exfoliative layer, and the exfoliative layer is broken to separate constituent members.

21. The method according to claim 20, which comprises the step of irradiating the exfoliative layer with electron rays.

5 22. The method according to claim 20, wherein the semiconductor device has a foam precursor, and the semiconductor device is heated to cause the foam precursor to blow to form the exfoliative layer.

10 ~~10.~~⁸ 23. The method according to claim ~~20~~⁸, wherein the semiconductor device further has a protective layer, and which method comprises the step of removing the filler remaining on the surface and/or back of the semiconductor element after separating the protective
15 layer and/or substrate of the semiconductor device.

~~11.~~¹⁰ 24. The method according to claim ~~23~~¹⁰, wherein the filler is removed with an acid, an alkali or an organic solvent.

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Sub a3 ~~25.~~ 25. A solar cell module comprising a substrate, a filler, a photovoltaic element and a protective layer, wherein the photovoltaic element is separable from the substrate.

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 26. The solar cell module according to claim 25, which is separable into a laminate having the

photovoltaic element, and the substrate.

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27. The solar cell module according to claim 25,
which is separable into a laminate having the
5 photovoltaic element, and the protective layer.

28. The solar cell module according to claim 25,
which further comprises an exfoliative layer.

10 29. The solar cell module according to claim 28,
wherein the exfoliative layer comprises a thermoplastic
resin.

Sub 4

15 30. The solar cell module according to claim 29,
wherein the thermoplastic resin is of non-crosslinking.

31. The solar cell module according to claim 28,
wherein the exfoliative layer comprises a degradable
resin.

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32. The solar cell module according to claim 28,
wherein the exfoliative layer comprises a foam or a
foam precursor.

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25 33. A process for producing a solar cell module
having a substrate, a filler, a photovoltaic element
and a protective layer; the process comprising the step

of producing the solar cell module in such a way that the photovoltaic element is separable from the substrate.

Sub C⁵ 77 34. The process according to claim 33, which comprises the step of producing the solar cell module so as to be separable into a laminate having the photovoltaic element, and the substrate.

10 35. The process according to claim 33, which comprises the step of producing the solar cell module so as to be separable into a laminate having the photovoltaic element, and the protective layer.

15 36. The process according to claim 33, which comprises the step of producing the solar cell module so as to have an exfoliative layer.

20 37. The process according to claim 36, wherein the exfoliative layer comprises a thermoplastic resin.

38. The process according to claim 37, wherein the thermoplastic resin is of non-crosslinking.

25 39. The process according to claim 36, wherein the exfoliative layer comprises a degradable resin.

40. The process according to claim 36, wherein the exfoliative layer comprises a foam or a foam precursor.

Sub C87 41. A method of dismantling a solar cell module having a substrate, a filler, a photovoltaic element and a protective layer; the method comprising separating the photovoltaic element from the substrate.

10 42. The method according to claim 41, which comprises the step of heating the solar cell module.

15 43. The method according to claim 41, which comprises the step of heating and moistening the solar cell module.

Sub C9 20 44. The method according to claim 41, wherein the solar cell module has an exfoliative layer, and the exfoliative layer is broken to separate constituent members.

25 45. The method according to claim 44, which comprises the step of irradiating the exfoliative layer with electron rays.

46. The method according to claim 44, wherein the solar cell module has a foam precursor, and the solar

cell module is heated to cause the foam precursor to blow to form the exfoliative layer.

~~21.~~¹⁸~~47.~~ The method according to claim ~~41~~¹⁸, which
5 comprises the step of removing the filler remaining on
the surface and/or back of the photovoltaic element
after separating the protective layer and/or substrate
of the solar cell module.

10 ~~22.~~²¹~~48.~~ The method according to claim ~~41~~²¹, wherein the
filler is removed with an acid, an alkali or an organic
solvent.

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15 ~~49.~~ A semiconductor device comprising a
substrate, a filler and a semiconductor element,
wherein at least one of the substrate, the filler and
the semiconductor element is separable from the other
constituent members by heating the semiconductor device.

20 ~~50.~~ A semiconductor device comprising a
substrate, a filler and a semiconductor element,
wherein at least one of the substrate, the filler and
the semiconductor element is separable from the other
constituent members by heating and moistening the
25 semiconductor device.

~~51.~~ A semiconductor device comprising a

substrate, a filler and a semiconductor element,
wherein at least one of the substrate, the filler and
the semiconductor element is separable from the other
constituent members by irradiating the semiconductor
5 device with electron rays.

10 52. A semiconductor device comprising a
substrate, a filler and a semiconductor element,
wherein at least one of the substrate, the filler and
the semiconductor element is separable from the other
constituent members by immersing the semiconductor
device in a liquid.

15 53. A solar cell module comprising a substrate, a
filler, a photovoltaic element and a protective layer,
wherein at least one of the substrate, the filler, the
photovoltaic element and the protective layer is
separable from the other constituent members by heating
the solar cell module.

20 54. A solar cell module comprising a substrate, a
filler, a photovoltaic element and a protective layer,
wherein at least one of the substrate, the filler, the
photovoltaic element and the protective layer is
25 separable from the other constituent members by heating
and moistening the solar cell module.

55. A solar cell module comprising a substrate, a filler, a photovoltaic element and a protective layer, wherein at least one of the substrate, the filler, the photovoltaic element and the protective layer is separable from the other constituent members by irradiating the solar cell module with electron rays.

56. A solar cell module comprising a substrate, a filler, a photovoltaic element and a protective layer, wherein at least one of the substrate, the filler, the photovoltaic element and the protective layer is separable from the other constituent members by immersing the solar cell module in a liquid.

57. A method of dismantling a semiconductor device having a substrate, a filler and a semiconductor element; the method comprising heating the semiconductor device to separate at least one of the substrate, the filler and the semiconductor element from the other constituent members.

58. A method of dismantling a semiconductor device having a substrate, a filler and a semiconductor element; the method comprising heating and moistening the semiconductor device to separate at least one of the substrate, the filler and the semiconductor element from the other constituent members.

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59. A method of dismantling a semiconductor device having a substrate, a filler and a semiconductor element; the method comprising irradiating the semiconductor device with electron rays to separate at least one of the substrate, the filler and the semiconductor element from the other constituent members.

60. A method of dismantling a semiconductor device having a substrate, a filler and a semiconductor element; the method comprising immersing the semiconductor device in a liquid to separate at least one of the substrate, the filler and the semiconductor element from the other constituent members.

61. A method of dismantling a solar cell module having a substrate, a filler, a photovoltaic element and a protective layer; the method comprising heating the solar cell module to separate at least one of the substrate, the filler, the photovoltaic element and the protective layer from the other constituent members.

62. A method of dismantling a solar cell module having a substrate, a filler, a photovoltaic element and a protective layer; the method comprising heating and moistening the solar cell module to separate at least one of the substrate, the filler, the

photovoltaic element and the protective layer from the other constituent members.

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5 63. A method of dismantling a solar cell module having a substrate, a filler, a photovoltaic element and a protective layer; the method comprising irradiating the solar cell module with electron rays to separate at least one of the substrate, the filler, the photovoltaic element and the protective layer from the other constituent members.
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64. A method of dismantling a solar cell module having a substrate, a filler, a photovoltaic element and a protective layer; the method comprising immersing
15 the solar cell module in a liquid to separate at least one of the substrate, the filler, the photovoltaic element and the protective layer from the other constituent members.

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